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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/818,095	03/27/2001	Debabrata Mukherjee	00-40383-US	2838

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EXAMINER

SHEWAREGED, BETELHEM

ART UNIT PAPER NUMBER

1774

DATE MAILED: 02/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/818,095

Applicant(s)

MUKHERJEE ET AL.

Examiner

Betelhem Shewareged

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,6-15,18-32,44-47 and 49-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,6-15,18-32,44-47 and 49-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's response filed on 11/19/2003 has been fully considered. The 35 USC 112 rejection has been withdrawn in view of applicant's amendment and comment. The prior art rejections have been withdrawn because the examiner fails to show the layer that is equivalent to the claimed undercoat layer. The examiner will re-write the rejection by including the layer that is equivalent to the claimed undercoat layer.
2. Claims 1, 6-11, 15, 18-32, 50 and 51 are amended, claims 2-5, 16, 17, 33-43, 48 and 52 are cancelled, and thus claims 1, 6-15, 18-32, 44-47 and 49-51 are pending.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 12, 14, 15, 18, 21, 23, 25, 27-29, 31, 32 and 44-47 are rejected under 35 U.S.C. 102(e) as being anticipated by Ohbayashi et al. (US 6,492,005 B1).

Ohbayashi discloses an ink jet recording sheet comprising a support having a front surface and a back surface, and an ink absorptive layer is provided on the front surface of the support (abstract). The support comprises a polyolefin i.e., polyethylene coated paper (col. 19, line 60 and col. 20, line 58). The polyethylene may be coated on

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both sides of the paper (col. 20, line 6 and col. 21, line 8). The polyethylene coated on the front surface of the paper is equivalent to the claimed barrier layer, the paper is equivalent to the claimed base substrate, and the polyethylene coated on the back surface of the paper is equivalent to the claimed anti-curl layer. A surface sizing agent may be coated onto the surface of the paper (col. 20, line 51), wherein the layer of the surface sizing agent is equivalent to the claimed undercoat layer. The recording sheet further comprises a sublayer coated on the support (col. 21, line 33), wherein the sublayer is equivalent to the claimed subbing coating. The support is subjected to corona treatment (col. 20, line 1). The ink absorptive layer comprises a binder and inorganic particles (col. 13, line 32). The binder is a combination of two or more of polyvinyl alcohol, gelatin, polyvinyl pyrrolidone, polyurethane and hydroxymethyl cellulose (col. 13, line 61 thru col. 14, line 2). The ink absorptive layer also comprises latex based polymer such as styrene butadiene copolymer latex and vinyl acetate based latex (col. 16, line 42). The latex based polymer is equivalent to the claimed latex binder. The inorganic particles are clay, colloidal silica or alumina (col. 13, line 35). The ink absorptive layer further contains cationic polymer having quaternary ammonium bases and polycondensation product of polyalkylenepolyamine-dicyandiamide (col. 15, lines 5-11). The cationic polymer having quaternary ammonium bases is equivalent to the claimed at least one absorbent material, and the polycondensation product of polyalkylenepolyamine-dicyandiamide is equivalent to the claimed at least one cationic polymer. The ink absorptive layer also contains additives such as fluorescent whitening agents, lubricants, thickeners, etc. (col. 16, lines 19-34). The fluorescent whitening

agents are equivalent to the claimed color pigmented and brightener dyes, the lubricant is equivalent to the claimed plasticizer, and the thickener is equivalent to the claimed flow agent. The ink absorptive layer contains hardeners (crosslinkers) such as azine and alum compounds (col. 15, line 34).

The process by which the barrier layer is cured is not dispositive of the issue of the patentability of the instant article claims.

With respect to surface energy value of the barrier layer, it is elementary that the mere recitation of newly discovered function or property, inherently possessed by things in the prior art, does not cause a claim drawn to those things to distinguish over the prior art. *In re swinehart et al.*, 169 USPQ 226 at 229. Since the Ohbayashi reference teaches all of Applicant's claimed compositional and positional limitations, it is inherent that the reference article function in the same manner claimed by Applicant. The burden is upon Applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied on. This burden has not yet been met.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 19, 20, 22, 26, 30 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohbayashi et al. (US 6,492,005 B1) as applied to claims 1, 12, 14, 15, 18, 21, 23, 25, 27-29, 31, 32 and 44-47, above.

The experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants' claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233. One of ordinary skill in the art would have been motivated to adjust the amount of hydrophilic binder, cationic polymer, latex binder and inorganic particles, and the coating weight of the ink absorptive layer in order to optimize the water resistance, fading resistance and ink absorbing properties of the recording medium. A prima facie case of obviousness may be rebutted, however, where the results of the optimizing variable, which is known to be result-effective, are unexpectedly good. *In re Boesch and Slaney*, 205 USPQ 215.

7. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohbayashi et al. (US 6,492,005 B1) as applied to claims 1, 12, 14, 15, 18, 21, 23, 25, 27-29, 31, 32 and 44-47, above.

The experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants' claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233. One of ordinary skill in the art would have been motivated to adjust the amount of hardener in order to improve the reaction between the different groups of polymers. A prima facie case of obviousness may be

rebutted, however, where the results of the optimizing variable, which is known to be result-effective, are unexpectedly good. *In re Boesch and Slaney*, 205 USPQ 215.

8. Claims 49 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohbayashi et al. (US 6,492,005 B1) as applied to claims 1, 12, 14, 15, 18, 21, 23, 25, 27-29, 31, 32 and 44-47, above.

The experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants' claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233. One of ordinary skill in the art would have been motivated to adjust the coating weight of the barrier layer and the backing layer in order to photograph quality and minimize the tendency to curl. A prima facie case of obviousness may be rebutted, however, where the results of the optimizing variable, which is known to be result-effective, are unexpectedly good. *In re Boesch and Slaney*, 205 USPQ 215.

9. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohbayashi et al. (US 6,492,005 B1) as applied to claims 1, 12, 14, 15, 18, 21, 23, 25, 27-29, 31, 32 and 44-47, above, in further view of Shimano et al. (US 6,326,323 B1).

Shimano teaches an ink jet recoding fabric having a fibrous support an ink absorbing layer on the support (abstract). Shimano further teaches it is possible to combine a flame retardant agent in the ink absorbing layer (col. 5, line 14).

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Ohbayashi and Shimano are analogous art because they are from the same field of endeavor that is the ink jet recording medium art. At the time of the invention, it would be obvious to one of ordinary skill in the art to combine the flame retarding agent of Shimano with the ink absorptive layer of Ohbayashi as an additives in order to provide an ink jet recoding medium having a flame retarding property.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Betelhem Shewareged whose telephone number is 571-272-1529. The examiner can normally be reached on Mon.-Thur. 7:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H Kelly can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Betelhem Shewareged
February 15, 2004.